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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

LE, UYEN T

ART UNIT PAPER NUMBER

2171

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|-----------------------|-----------------|-------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/858,426 | RAUTENBACH ET AL. | |
| | Examiner | Art Unit | |
| | Uyen T. Le | 2171 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 7.13.
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 19-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 19-20 merely recite non-functional descriptive material, thus do not meet the test set out in *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02 that the claim as a whole must accomplish a practical application producing a "useful, concrete and tangible result."

Claim 21 adds the limitation that the entry is searched for by examining a list of entries. However, broadly interpreted, the claimed limitation can be implemented by a person using paper and pencil. Thus claims 19-21 are directed to non-statutory subject matter.

Claim Objections

3. Claim 14 objected to because it seems that line 1, "examining" should be – overwriting—for the claim to make sense.

Appropriate correction is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 5, 7, 8, 10, 12-15, 17, 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Houldsworth (US 6,314,436).

Regarding claim 1, Houldsworth discloses all the claimed subject matter (see the abstract, Figures 1-8, column 2, line 12- column 3, line 60). The claimed “reading a start pointer of one of the entries” is met when Houldsworth shows checking whether the start pointer is set to null and starting with an item that carries a pointer. The claimed “examining the entries...is found” and “accessing the particular entity” are met when Houldsworth shows determining the items referenced by the item under consideration, selecting next items and determining whether this item is white (see column 6, lines 20-60). The claimed “overwriting the start pointer so as to point to the particular entry” is met by the fact that the start pointer is updated once all items referenced by an item under consideration have been dealt with (see Figures 2-4, 7, 8).

Claim 7 is essentially claims 1 and 2 combined, thus is rejected for the same reasons stated in claims 1 and 2 above.

Claim 12 merely differs from claim 1 by reciting a “reference” instead of a “pointer”. The pointer in Houldsworth is clearly a reference. Therefore, claim 12 is rejected for the same reasons stated in claim 1 above.

Regarding claims 2, 13, the claimed “terminating examination...have been examined” merely reads on the fact that the method of Houldsworth terminates when the stack is empty (see Figure 6).

Regarding claims 3, 8, 15, Houldsworth discloses reading the entry (see Figures 2-4).

Regarding claims 5, 10, 17, clearly the method of Houldsworth does not require a ~~mutex for overwriting the start pointer since Houldsworth does not mention any locking~~ mechanism.

Claim 14 merely reads on the fact that once the items at the bottom level of the list of items have been determined, the operation terminates (see Figures 2-4).

Regarding claim 19, Houldsworth discloses all the claimed subject matter (see Figures 1-8, column 2, line 56- column 3, line 24)). The claimed “a list of entries...closed loop” is met when Houldsworth shows pointers linking objects. The claimed “overwritable start pointer...the entry” merely reads on the fact that the start pointer moves from one object to the next referenced object in the method of Houldsworth.

Regarding claim 20, Houldsworth discloses searching and finding an entry when the method traverses using pointers (see column 2, lines 56-61).

Regarding claim 21, the claimed "wherein the particular...entry is found" merely reads on the fact that the method of Houldsworth determines all objects linked to the root (see column 2, lines 65-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 6, 9, 11, 16, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houldsworth (US 6,314,436), in view of Fresko et al (US 6,349,312).

Regarding claims 4, 9, 16, Houldsworth discloses writing to the entry when Houldsworth shows that the method changes the color of an item (see Figures 2-4). Although Houldsworth does not specifically show imposing a mutex, it is well known in the art as shown by Fresko to use a mutual exclusive operation on multiple requests (see column 6, lines 50-66). Therefore, it would have been obvious to one of ordinary skill in the art to include the claimed features while implementing the method of Houldsworth in order to prevent concurrent updates to an entry.

Regarding claims 6, 11, 18, although Houldsworth does not specifically show a multi-threaded computer system, it is well known in the art as shown by Fresko to enhance a single-threaded system to a multi-threaded system (see column 6, lines 39-49). Therefore, it would have been obvious to one of ordinary skill in the art to include

the claimed features while implementing the method of Houldsworth in order to allow sharing of memory as taught by Fresko.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zucker (US 6,047,362) teaches delayed removal of address mapping for terminated processes.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen T. Le whose telephone number is 703-305-4134.

The examiner can normally be reached on M-F 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



7 April 2004

UYEN LE
PRIMARY EXAMINER